



Hydrogen Peroxide Compatibility with Aluminum Surfaces



Objective

One of the major implications of paint removal products is the effect they have on certain surfaces. Hydrogen peroxide has become an excellent source for the removal of paint systems. Various paint removal products contain a proprietary concentration of hydrogen peroxide. After discussions with these vendors, it was found that the majority of paint removal products do not exceed concentrations of 10%. Although, these products are excellent for removing certain paint systems, they also present a compatibility problem with surface corrosion, surface roughness and hydrogen embrittlement. The types of aluminum used by the space and commercial industries will be surveyed. Once the various types have been determined, materials will be purchased to support the test effort. Various kinds of paint removal products used in the space industry and commercial ventures will be assessed for their removal capability. Concentrations of 1%, 5% and 10% hydrogen peroxide will be tested on various types of aluminum surfaces. Measurements and evaluations of the various products will be reported.

Why Needed

Results produced should be directly related to surface corrosion, surface contamination, and hydrogen embrittlement. It is expected that none of these factors would have a major impact on the proposed aluminum surfaces; however, significant impacts may be another issue for consideration. Development of new products moves at a rapid pace. The test bed for evaluating the application of new products is not often readily available in industry because of the research effort that is required. There is currently insufficient data to determine if there are significant impacts on aluminum surfaces from the use of certain paint removal products.

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